

GEOMETRY — MODEL No 1**[Q1] Choose the correct answer:**

- (1) The sum of measures of interior angles of pentagon =°
a) 180 b) 360 c) 540 d) 720
- (2) The square is a rhombus whose diagonals are
a) Perpendicular b) Equal c) Parallel d) bisect
- (3) The image of point $(-2, -7)$ by reflection on Y-axis is
a) $(-2, 7)$ b) $(2, -7)$ c) $(2, 7)$ d) $(-2, -7)$
- (4) The image of pint $(3, 4)$ by rotation around origin point with angle 180° is
a) $(4, -3)$ b) $(-4, 3)$ c) $(-3, -4)$ d) $(4, 3)$
- (5) In $\triangle XYZ$, $m(\angle X) + m(\angle Y) = 90^\circ$, then $m(\angle Z) = \dots\dots\dots^\circ$
a) 30 b) 60 c) 90 d) 180
- (6) The measure of exterior angle of equilateral triangle°
a) 60 b) 90 c) 120 d) 180

[Q2] Complete each of the following:

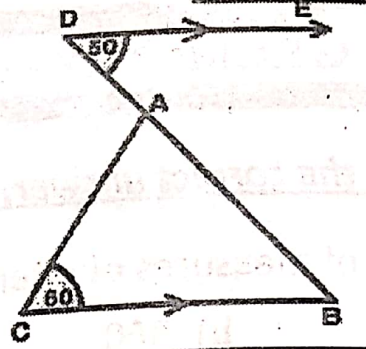
- 1) The image of point $(4, 3)$ by translation $(3, 4)$ is
- 2) The line segment drawn between two midpoints of two sides in triangle the third side
- 3) If ABCD is square, $m(\angle ACD) = \dots\dots\dots^\circ$
- 4) The diagonal of rectangle whose dimensions 3 cm , 4 cm is ...
- 5) The rhombus is a Parallelogram with diagonal

[Q3] A) In the opposite figure:

$$\overline{DE} \parallel \overline{BC}, m(\angle C) = 60^\circ,$$

$$m(\angle D) = 50^\circ$$

Find by proof: $m(\angle DAC)$



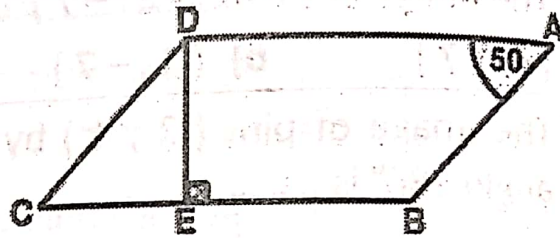
B) A regular polygon the measure of its interior angles 108° , if its side length 5 cm, Find its perimeter.

[Q4] A) In the opposite figure:

ABCD is Parallelogram,

$$\overline{DE} \perp \overline{BC}, m(\angle A) = 50^\circ,$$

Find by proof: $m(\angle EDC)$

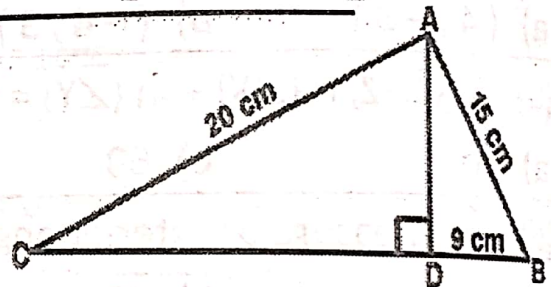


B) In the opposite figure:

$$\overline{AD} \perp \overline{BC}, AB = 15 \text{ cm}, BD = 9 \text{ cm}$$

$$AC = 20 \text{ cm}$$

Find by proof length of \overline{AD} , \overline{DC}



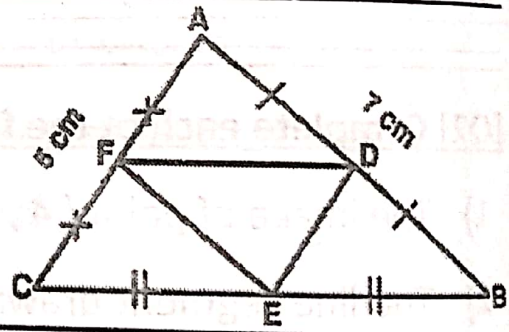
[Q5] A) In the opposite figure:

ΔABC , D, E, F are midpoints

of \overline{AB} , \overline{BC} , \overline{CA}

If $AB = 7 \text{ cm}$, $BC = 10 \text{ cm}$, $CA = 5 \text{ cm}$

Find by proof perimeter of ΔDEF



B) On the coordinate plane: locate ΔABC where $A(2, 4)$, $B(2, 6)$, $C(6, 6)$, then determine $\Delta A'B'C'$ image of ΔABC by reflection on origin point



End of the questions

GEOMETRY – MODEL No 2

[Q1] Choose the correct answer:

- (1) Sum of interior angles of hexagon equals°
a) 360 b) 540 c) 720 d) 1080
- (2) The square is a rectangle its diagonal are
a) Perpendicular b) Equal c) Parallel d) Bisect each other
- (3) The image of point (3 , - 4) by rotation around origin point with angle 90° is
a) (- 3 , 4) b) (4 , 3) c) (- 3 , - 4) d) (3 , 4)
- (4) The image of point (2 , - 3) by translation 3 units in the positive direction of Y – axis is
a) (5 , 0) b) (5 , - 3) c) (2 , 0) d) (2 , - 9)
- (5) In $\triangle ABC$, $m(\angle B) + m(\angle C) = 120^\circ$, then $m(\angle A) = \dots\dots\dots^\circ$
a) 30 b) 60 c) 90 d) 120
- (6) In any triangle there are twoangles at least
a) Acute b) Right c) Obtuse d) straight

[Q2] Complete each of the following:

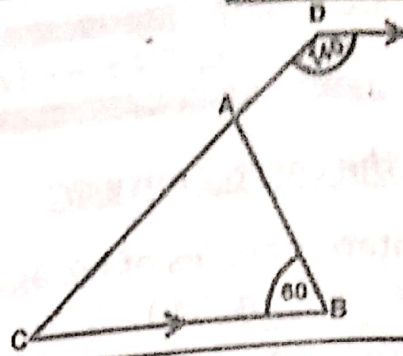
- 1) The image of point (2 , - 5) by reflection on origin point is
- 2) The ray drawn from midpoint of a side parallel to second side is.....
- 3) If ABCD is a rhombus, $m(\angle ACB) = 50^\circ$, then $m(\angle BAD) = \dots^\circ$
- 4) XYZL is a rectangle, $XY = 8\text{ cm}$, $XZ = 10\text{ cm}$, then $YZ = \dots\dots\dots\text{cm}$
- 5) The rectangle is a Parallelogram its diagonal

[Q3] A) In the opposite figure:

$$\overline{DE} \parallel \overline{BC}, m(\angle C) = 60^\circ,$$

$$m(\angle D) = 140^\circ$$

Find by proof: $m(\angle DAB)$



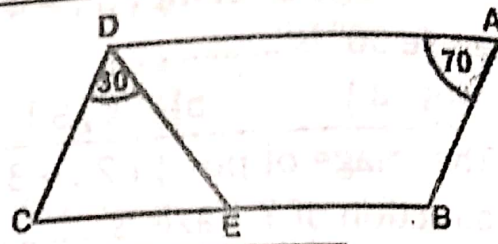
B) A regular polygon the measure of its exterior angles 60° , if its side length 10 cm, Find its perimeter.

[Q4] A) In the opposite figure:

ABCD is Parallelogram,

$$m(\angle A) = 70^\circ, m(\angle EDC) = 30^\circ$$

Find by proof: $m(\angle DEB)$

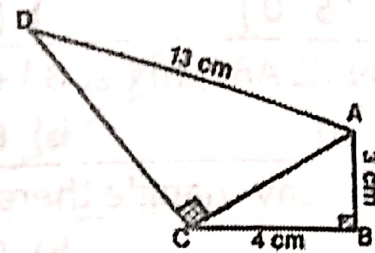


B) In the opposite figure:

$$m(\angle B) = m(\angle ACD) = 90^\circ$$

$$AB = 3 \text{ cm}, BC = 4 \text{ cm}, AD = 13 \text{ cm}$$

Find by proof length of \overline{AC} , \overline{DC}



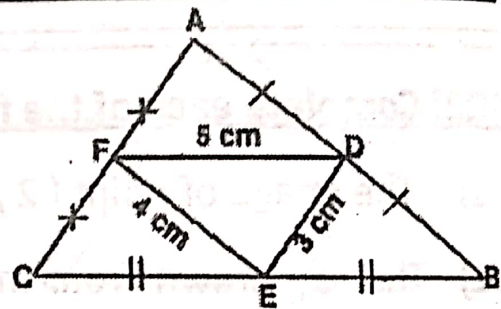
[Q5] A) In the opposite figure:

$\triangle ABC$, D, E, F are midpoints

Of \overline{AB} , \overline{BC} , \overline{CA}

$$\text{If } DE = 3 \text{ cm}, EF = 4 \text{ cm}, FD = 5 \text{ cm}$$

Find by proof perimeter of $\triangle ABC$



B) On the coordinate plane: locate $\triangle ABC$ where $A(1, 3)$, $B(5, 3)$, $C(5, 6)$, then determine $\triangle A'B'C'$ image of $\triangle ABC$ by reflection on X - Axis

End of the questions

GEOMETRY – MODEL No 3**[Q1] Choose the correct answer:**

- (1) The measure of each interior angle of regular hexagon is°
a) 60 b) 108 c) 120 d) 135
- (2) The Parallelogram its diagonal equal and perpendicular is
a) Rectangle b) Square c) Trapezium d) Rhombus
- (3) Sum of two consecutive angles in Parallelogram equals.....°
a) 90 b) 180 c) 270 d) 360
- (4) The measure of exterior angle of an equilateral triangle is°
a) 60 b) 90 c) 120 d) 180
- (5) The image of point (3 , 5) by rotation M (O , 90°) is
a) (- 3 , 5) b) (- 5 , 3) c) (3 , - 5) d) (- 3 , - 5)
- (6) In any triangle there are two Angles at least.
a) Acute b) Right c) Obtuse d) Straight

[Q2] Complete each of the following:

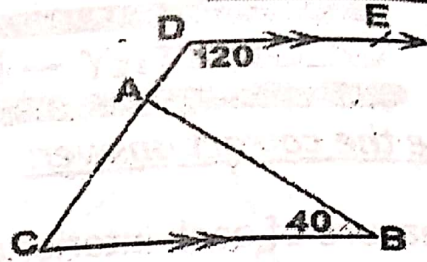
- 1) Sum of accumulative angles at point is°
- 2) The ray drawn from midpoint of a side of triangle parallel to other side The third side
- 3) In $\triangle ABC$, $m(\angle A) = 50^\circ$, $m(\angle B) = 70^\circ$, then $m(\angle C) = \dots\dots\dots^\circ$
- 4) In $\triangle ABC$, $m(\angle Y) = 90^\circ$, $XY = 6\text{ cm}$, $YZ = 8\text{ cm}$, then $XZ = \dots\dots\dots$
- 5) The image of the point (- 3 , 2) with rotation M(O , 180°) where O is an origin point is

[Q3] A) In the opposite figure:

$$\overrightarrow{DE} \parallel \overrightarrow{BC}, m(\angle D) = 120^\circ,$$

$$m(\angle B) = 40^\circ$$

Find by proof: $m(\angle BAD)$

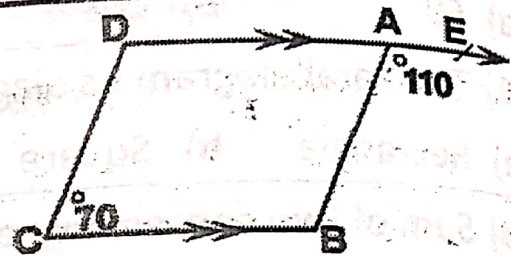


B) In the opposite figure:

$$E \in \overrightarrow{DA}, m(\angle EAB) = 110^\circ,$$

$$m(\angle C) = 70^\circ$$

Prove that: ABCD is Parallelogram



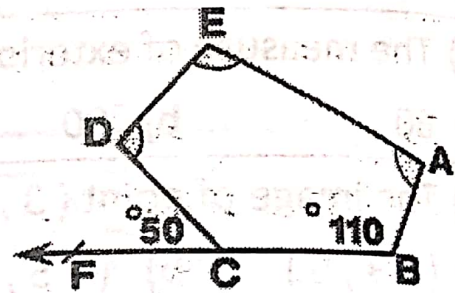
[Q4] A) In the opposite figure:

ABCDE is pentagon, $F \in \overrightarrow{BC}$

$$m(\angle B) = 110^\circ, m(\angle DCF) = 50^\circ$$

$$m(\angle A) = m(\angle E) = m(\angle D)$$

Find by proof $m(\angle E)$

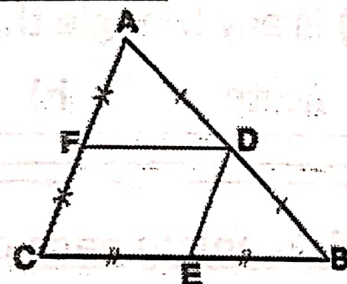


B) In the opposite figure:

In $\triangle ABC$, D, E, F are midpoints of

\overline{AB} , \overline{BC} , \overline{CA} , $BC = 12$ cm, $AC = 10$ cm

Find perimeter of figure DECF

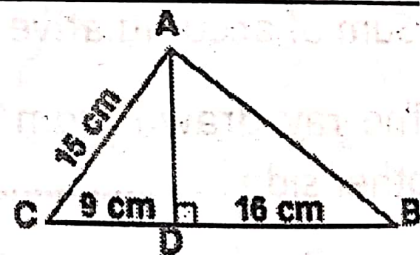


[Q5] A) In the opposite figure:

$\triangle ABC$, $\overline{AD} \perp \overline{BC}$, $DC = 9$ cm,

$BD = 16$ cm, $AC = 15$ cm

Find length of \overline{AD} , \overline{AB}



B) In coordinate plane, draw \overline{AB} where $A(2, 1)$, $B(1, 3)$ Find:

① Image of \overline{AB} with rotation $M(O, 90^\circ)$

② Image of \overline{AB} with rotation $m(O, 180^\circ)$

End of the questions

GEOMETRY – MODEL NO 4**[Q1] Choose the correct answer:**

(1) The measure of exterior angle of an equilateral triangle is^o

- a) 60 b) 90 c) 120 d) 180

(2) The ray drawn from midpoint of a side of triangle to other side bisect The third side

- a) Parallel b) Congruent c) equal d) Bisects

(3) Two diagonal are equal and perpendicular in

- a) Square b) Rhombus c) Rectangle d) Parallelogram

(4) The hexagon has Diagonals

- a) 5 b) 6 c) 9 d) 12

(5) The quadrilateral will be a Parallelogram if two sides parallel and.....

- a) Intersecting b) Congruent c) Adjacent d) Perpendicular

(6) In $\triangle ABC$, if $m(\angle A) = 4X$, $m(\angle B) = 2X$, $m(\angle C) = 3X$, then $\angle A$ is...

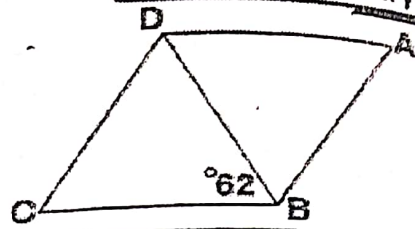
- a) Acute b) Right c) reflex d) obtuse

[Q2] Complete each of the following:

- 1) Image of $(5, -12)$ with reflection in origin point is
- 2) Sum of accumulative angles at point equals
- 3) The image of point $(-2, 5)$ with reflection at Y-axis is
- 4) In any triangle, if the measure of any angle equal sum of other two angles, then the triangle is
- 5) The image of $(5, 3)$ with translation $(X, Y) \rightarrow (X + 3, Y - 2)$ is

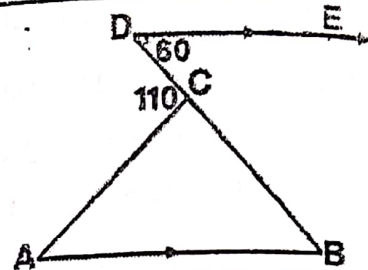
[Q3] A) In the opposite figure:

ABCD is rhombus, \overline{BD} is diagonal,
 $m(\angle DBC) = 62^\circ$, Find $m(\angle A)$



B) In the opposite figure:

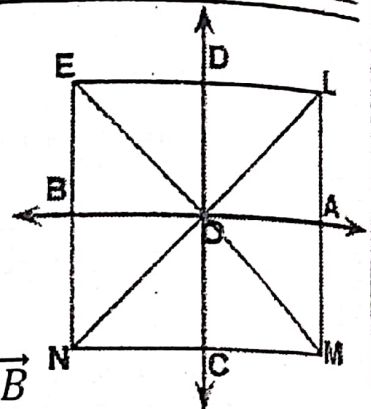
$\triangle ABC$, $\overline{DE} \parallel \overline{AB}$, $m(\angle D) = 60^\circ$,
 $m(\angle ACD) = 110^\circ$, Find measure
 Of each angle in $\triangle ABC$



[Q4] A) In the opposite figure:

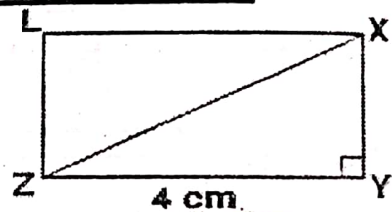
LMNE is square; its center is point O
 The horizontal axis cut \overline{LM} at A, \overline{NE} at B,
 The vertical axis cut \overline{LE} at D, \overline{MN} at C
 Find:

- ① Image of $\triangle AOL$ with reflection in O
- ② Image of figure AMNO with reflection in \overleftrightarrow{AB}



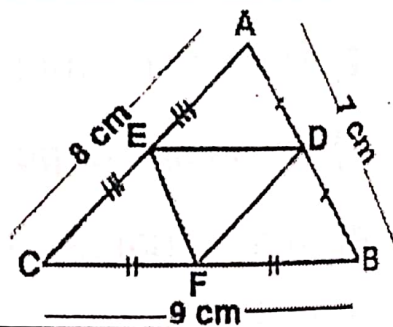
B) In the opposite figure:

XYZL is a rectangle; its area is 12 cm^2 ,
 $YZ = 4 \text{ cm}$, Find length of \overline{XZ}



[Q5] A) In the opposite figure:

$\triangle ABC$, D, E, F are midpoints
 Of \overline{AB} , \overline{AC} , \overline{BC}
 If $BC = 9 \text{ cm}$, $AB = 8 \text{ cm}$, $AC = 8 \text{ cm}$
 Find by proof perimeter of $\triangle DEF$.



B) In coordinate plane, draw $\triangle ABC$ where $A(5, 5)$, $B(5, 2)$,
 $C(3, 2)$ Find the Image of $\triangle ABC$ with rotation $M(O, 90^\circ)$

End of the questions

GEOMETRY – MODEL No**5****[Q1] Choose the correct answer:**

(1) The sum of measures of interior angles of heptagon =°

- a) 540 b) 720 c) 900 d) 1080

(2) Image of point (3 , 1) with reflection in Y_1 - axis is

- a) (- 3 , -1) b) (-3 , 1) c) (3 , -1) d) (3 , 1)

(3) The Parallelogram with right angle is

- a) Square b) Rhombus c) Rectangle d) Trapezium

(4) The diagonal of rectangle whose length 4 cm, width 3 cm is

- a) 3 cm b) 4 cm c) 5 cm d) 6 cm

(5) The ratio between two complementary angles is 1 : 2, then the measure of the greatest angle is°

- a) 30 b) 60 c) 90 d) 120

(6) Sum of consecutive of two adjacent angles in Parallelogram equals°

- a) 90 b) 180 c) 270 d) 360

[Q2] Complete each of the following:

1) The measure of exterior angle of the convex polygon equal 30° , then the number of its sides is

2) In right angle triangle, square length of hypotenuse equal.....

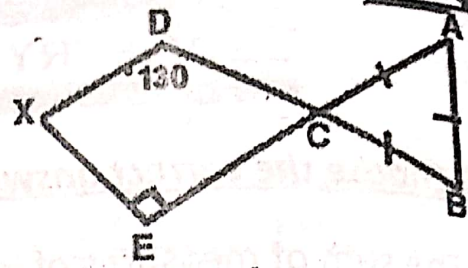
3) Image of point (5 , 7) with rotation $M (O , 90^\circ)$ is

4) The line segment join between to midpoints of a triangle to the third side

5) The image (3 , 4) with translation $(X , Y) \rightarrow (X - 5 , Y - 3)$ is ...

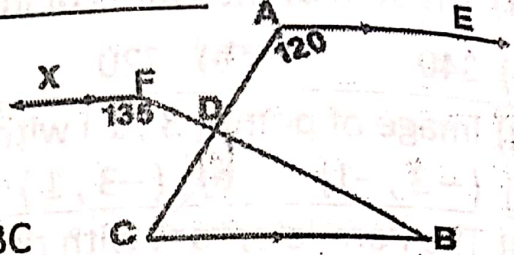
[Q3] A) In the opposite figure:

$\triangle ABC$ is an equilateral triangle,
 $\overline{BD} \cap \overline{AE} = \{C\}$, $m(\angle D) = 130^\circ$,
 Find $m(\angle X)$



B) In the opposite figure:

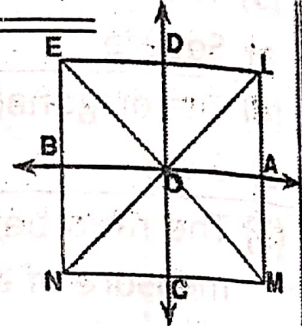
$\overline{AE} \parallel \overline{FX} \parallel \overline{BC}$, if $m(\angle A) = 120^\circ$,
 $m(\angle F) = 135^\circ$,
 Find measure of each angle in $\triangle DBC$



[Q4] A) In the opposite figure:

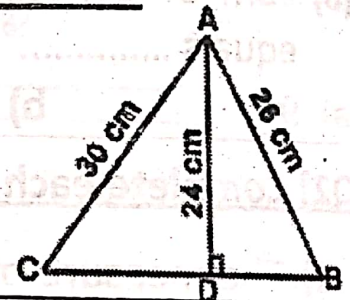
LMNE is square; its center is point O
 The horizontal axis cut \overline{LM} at A, \overline{NE} at B,
 The vertical axis cut \overline{LE} at D, \overline{MN} at C, Find:

- ① Image of $\triangle AOL$ with reflection in O
- ② Image of figure AOL with translation LO in direction of \overrightarrow{LO}



B) In the opposite figure:

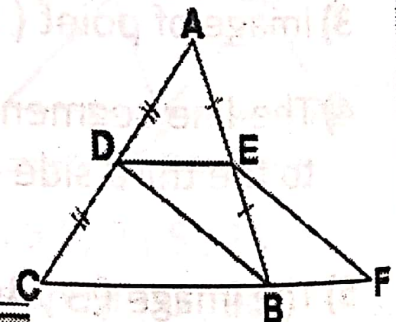
$\overline{AD} \perp \overline{BC}$, $AB = 26$ cm,
 $AD = 24$ cm, $AC = 30$ cm
 Find length of \overline{BC} , area of $\triangle ABC$



[Q5] In coordinate plane, draw $\triangle ABC$ where $A(1, 1)$, $B(3, 4)$,
 $C(5, 2)$ Find the Image of $\triangle ABC$ with reflection in X-axis

B) In the opposite figure:

$\triangle ABC$, D midpoint of \overline{AC} ,
 E midpoint of \overline{AB} , $FB = \frac{1}{2} BC$,
 Prove that the figure EFBD is Parallelogram



End of the questions

GEOMETRY – MODEL No

6

[Q1] Choose the correct answer:

(1) The measure of exterior angle of an equilateral triangle is°

- a) 60 b) 90 c) 120 d) 180

(2) The image of $(-1, 3)$ by translation $(4, -2)$ is

- a) $(3, 1)$ b) $(3, -1)$ c) $(5, 1)$ d) $(5, -5)$

(3) In a right angle triangle, the length of two sides of right angle 6cm, 8 cm, then the length of hypotenuse is

- a) 14 cm b) 3 cm c) 10 cm d) 100 cm

(4) The hexagon has Diagonals

- a) 3 b) 5 c) 7 d) 9

(5) The ratio between two supplementary angles is 5 : 13, then the measure of the greatest angle is°

- a) 50 b) 90 c) 130 d) 180

(6)

- a) b) c) d)

[Q2] Complete each of the following:

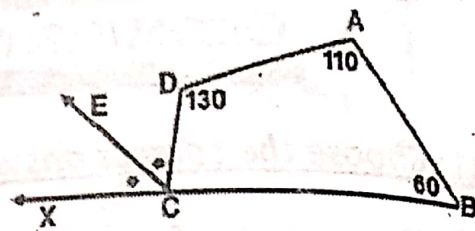
- The image of point by reflection on X – axis is $(3, 1)$
- The Parallelogram with right angle is called
- Two perpendicular straight lines on third are
- In Parallelogram ABCD, $m(\angle A) + m(\angle C) = 150^\circ$, then $m(\angle B) = \dots$
- The ray drawn from midpoint of a side of triangle parallel to other side The third side

[Q3] A) In the opposite figure:

CE bisects $\angle DCX$, $m(\angle A) = 110^\circ$

$m(\angle B) = 60^\circ$, $m(\angle D) = 130^\circ$

Prove that: $\overline{AB} \parallel \overline{CE}$

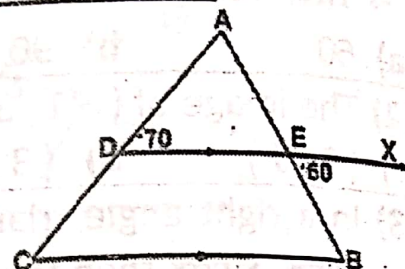


B) In the opposite figure:

$\overline{DE} \parallel \overline{BC}$, $m(\angle XEB) = 60^\circ$

$m(\angle ADE) = 70^\circ$

Find measure of each angle of $\triangle ABC$



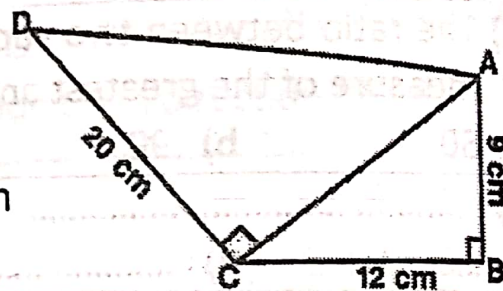
[Q4] A) In coordinate plane, draw $\triangle ABC$ where $A(1, 1)$, $B(5, 0)$, $C(5, 5)$ Find the Image of $\triangle ABC$ with rotation $M(O, 180^\circ)$.

B) In the opposite figure:

$m(\angle B) = m(\angle ACD) = 90^\circ$,

$AB = 9$ cm, $BC = 12$ cm, $DC = 20$ cm

Find perimeter of ABCD



[Q5] A) In coordinate plane, draw $\triangle ABC$ where $A(-2, 0)$, $B(0, 3)$, $C(-3, 3)$ Find the Image of $\triangle ABC$ with translation $(3, 2)$

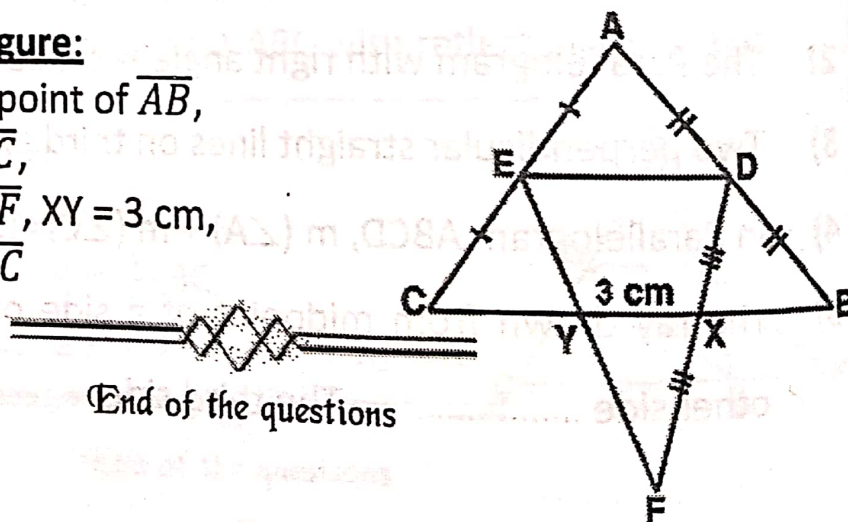
B) In the opposite figure:

$\triangle ABC$, D is midpoint of \overline{AB} ,

E midpoint of \overline{AC} ,

X midpoint of \overline{DF} , $XY = 3$ cm,

Find length of \overline{BC}



End of the questions

GEOMETRY — MODEL No 7**[Q1] Choose the correct answer:**

- (1) Sum of accumulative angles at point equalsright angles
a) 2 b) 3 c) 4 d) 5
- (2) If two straight lines are intersecting, then each to vertically opposite angles are
a) Supplementary c) Corresponding
b) Complementary d) Equal in measure
- (3) The perimeter of a rhombus whose diagonals 6 cm, 8 cm is
a) 14 cm b) 20 cm c) 24 cm d) 28 cm
- (4) The neutral rotation is rotation with angle^o
a) 90 b) ± 180 c) -90 d) ± 360
- (5) If the interior angle of a regular polygon is 108° , and its side 6cm, then its perimeter Cm
a) 24 b) 30 c) 36 d) 42
- (6) The image of $(3, -5)$ with translation is $(5, -2)$
a) $(2, -3)$ b) $(-2, -3)$ c) $(2, 3)$ d) $(-2, 3)$

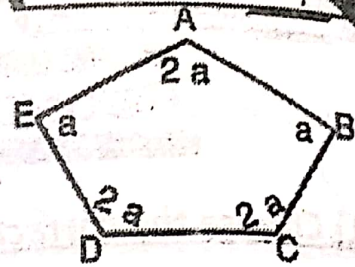
[Q2] Complete each of the following:

- 1) The measure of exterior angle of an equilateral triangle is^o
- 2) Is a rectangle with perpendicular diagonals
- 3) The line segment drawn between two midpoints of two sides in a triangle The third side
- 4) The image of $(2, 1)$ with reflection on X – axis is
- 5) In any triangle, if the measure of any angle equal sum of other two angles, then the triangle is

[Q3] A) In the opposite figure:

ABCDE is a pentagon,

Find the value of a ?

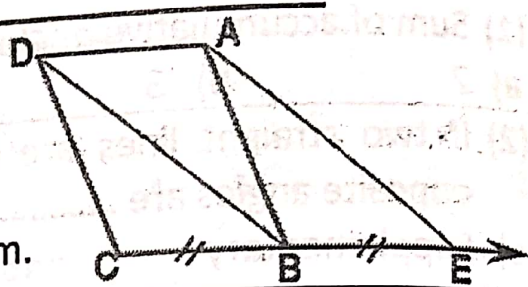


B) In the opposite figure:

ABCD is a Parallelogram,

$E \in \overline{CB}$, $EB = BC$

Prove that: AEBD is a Parallelogram.



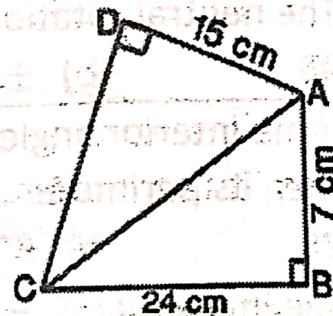
[Q4] A) On coordinate plane, draw $\triangle ABC$, $A(4, 1)$, $B(2, 4)$, $C(-1, 3)$ then draw its image with reflection on origin point

B) In the opposite figure:

$m(\angle B) = m(\angle D) = 90^\circ$, $AB = 7$ cm,

$BC = 24$ cm, $AD = 15$ cm,

Find the perimeter of ABCD



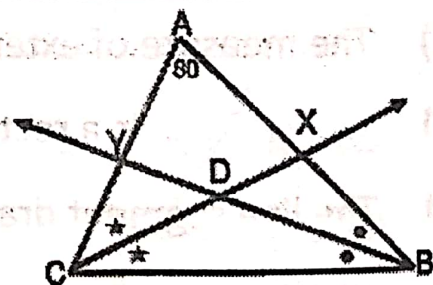
[Q5] A) On coordinate plane, draw $\triangle ABC$, $A(1, 1)$, $B(3, 1)$, $C(2, 3)$ then draw its image with rotation $M(O, 90^\circ)$.

B) In the opposite figure:

\overline{CX} bisects $\angle ACB$

\overline{BY} bisects $\angle ABC$, $m(\angle A) = 80^\circ$

Find $m(\angle XDY)$



End of the questions

GEOMETRY — MODEL NO 8

[Q1] Choose the correct answer:

(1) The measures of interior angle of a regular octagon =°

- a) 108 b) 120 c) 135 d) 1080

(2) If ABCD is a rhombus, $m(\angle ACB) = 32^\circ$, then $m(\angle D) = \dots\dots\dots^\circ$

- a) 32 b) 26 c) 64 d) 116

(3) $m(\angle A) + \text{reflex}(\angle A) = \dots\dots\dots$ right angles

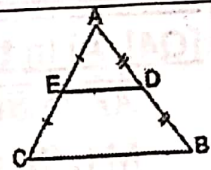
- a) two b) Three c) Four d) Five

(4) In the opposite figure:

D, E midpoints of AB, AC

Then $DE : BC = \dots\dots\dots$

- a) 1 : 2 b) 2 : 1 c) 1 : 3 d) 3 : 1



(5) The image of $(3, 5)$ with rotation $M(O, -90^\circ)$ is

- a) $(-3, 5)$ b) $(-5, 3)$ c) $(3, -5)$ d) $(-3, -5)$

(6) If $\angle A$ complements $\angle B$, $\angle B$ supplements $\angle C$, $m(\angle A) = 30^\circ$ then $m(\angle C) = \dots\dots\dots^\circ$

- a) 60 b) 120 c) 150 d) 180

[Q2] Complete each of the following:

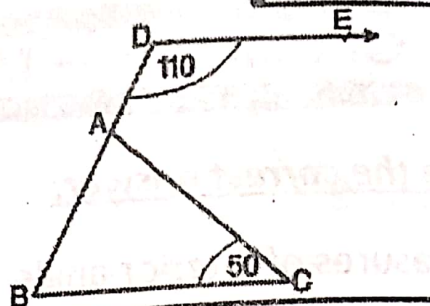
- The square is with perpendicular diagonals
- The ray drawn from midpoint of a side of triangle parallel to other side The third side
- In $\triangle ABC$, if $m(\angle A) : m(\angle B) : m(\angle C) = 1 : 2 : 3$, then $m(\angle C) = \dots\dots\dots$
- The perimeter of a rhombus with diagonals 12 cm, 16 cm is
- The image of $(-3, 2)$ by translation 3 units in negative direction of X-axis is point

[Q3] A) In the opposite figure:

$$\overrightarrow{DE} \parallel \overrightarrow{CB}, m(\angle D) = 110^\circ$$

$$m(\angle C) = 50^\circ$$

Find by prove $m(\angle DAC)$

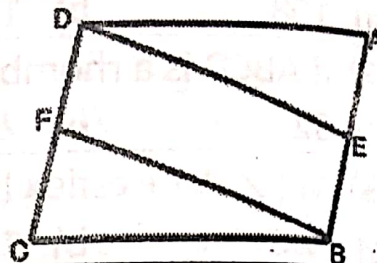


B) In the opposite figure:

ABCD is Parallelogram,

E midpoint of \overline{AB} , F midpoint of \overline{AC}

Prove that: DEBF is Parallelogram

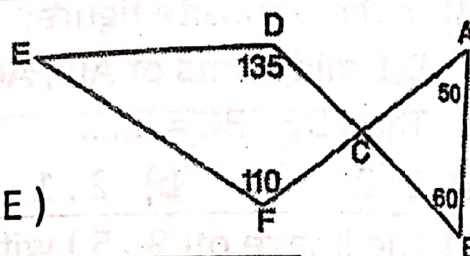


[Q4] A) In the opposite figure:

$$\overline{AF} \cap \overline{BD} = \{C\}, m(\angle A) = 50^\circ,$$

$$m(\angle B) = 60^\circ, m(\angle D) = 135^\circ,$$

$$m(\angle F) = 110^\circ, \text{ Find with proof: } m(\angle E)$$

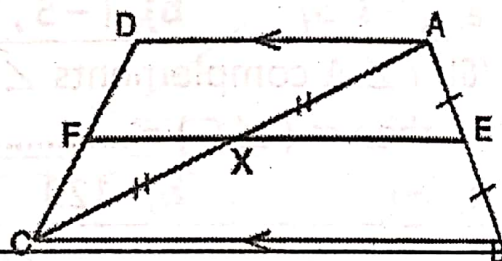


B) In the opposite figure:

$$\overline{AD} \parallel \overline{BC}, E \text{ midpoint of } \overline{AB}$$

$$X \text{ midpoint of } \overline{AC}$$

Prove that: F is midpoint of \overline{DC}

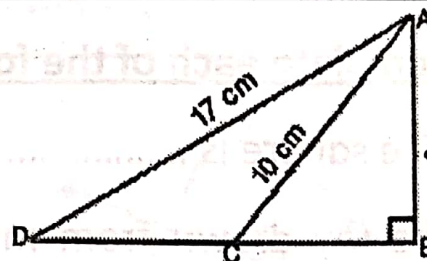


[Q5] A) In the opposite figure:

$\triangle ABC$ right at B, $AB = 8 \text{ cm}$,

$AC = 10 \text{ cm}$, $AD = 17 \text{ cm}$

Find the perimeter of $\triangle ADC$



B) In a coordinate plane, draw rectangle ABCD where $A(2, 5)$, $B(6, 5)$, $C(6, 8)$, $D(2, 8)$. Find the image of rectangle ABCD with reflection in origin point

End of the questions

GEOMETRY – MODEL No 9**[Q1] Choose the correct answer:**

- (1) The measure of interior angle of a regular polygon with 10 sides is^o
a) 72 b) 108 c) 144 d) 150
- (2) The image of the point $(-3, 5)$ by rotation about the origin and with an angle of measure 90° is ...
a) $(5, 3)$ b) $(-5, 3)$ c) $(3, 5)$ d) $(-5, -3)$
- (3) The smallest number of the acute angles in any triangle is...
a) Zero b) 1 c) 2 d) 3
- (4) The side length of a rhombus whose perimeter 20 cm =....
a) 10 cm b) 5 cm c) 80 cm d) 40 cm
- (5) The parallelogram whose diagonals are perpendicular and not equal in length is called
a) Rhombus b) Square c) Rectangle d) Trapezium
- (6) The image of the point $(-1, 3)$ by translation $(4, -2)$ is ...
a) $(3, 1)$ b) $(3, -1)$ c) $(5, 1)$ d) $(5, -5)$

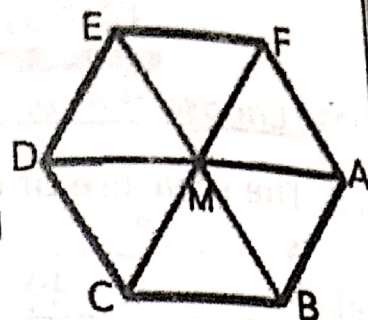
[Q2] Complete each of the following:

- 1) The rhombus is a parallelogram in which
- 2) The length of a line segment joining the midpoints of two sides of a triangle equals.....
- 3) The parallelogram whose diagonals are perpendicular and equal in length is
- 4) The parallelogram whose perimeter 24 cm and the length of one of its sides is 7 cm, then the length of its adjacent side equals.....
- 5) The image of the point $(3, 4)$ by reflection in the X -axis is.....and its image by reflection in the Y-axis is.....

[Q3] A) In the opposite figure:

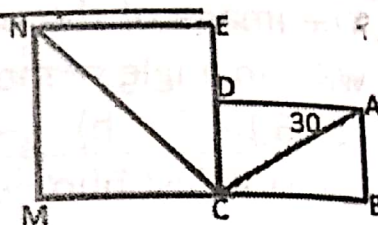
ABCDEF is a regular hexagon with center M
Find:

- ① Image of $\triangle AMF$ with rotation M ($M, 60^\circ$)
- ② Image of $\triangle AMF$ with reflection in point M
- ③ Image of $\triangle AMF$ with reflection on \overleftrightarrow{AD}



B) In the opposite figure:

ABCD is a rectangle, ECMN is a square
 $m(\angle CAD) = 30^\circ$, Find $m(\angle CAN)$

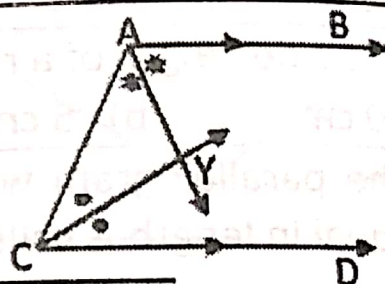


[Q4] A) In the opposite figure:

$\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$, \overleftrightarrow{AY} bisects $\angle BAC$

\overleftrightarrow{CY} bisects $\angle ACD$

Find with proof: $m(\angle AYC)$

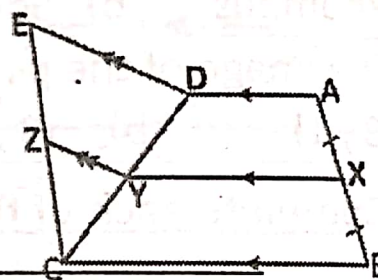


B) In the opposite figure:

$\overleftrightarrow{AD} \parallel \overleftrightarrow{XY} \parallel \overleftrightarrow{BC}$, $\overleftrightarrow{YZ} \parallel \overleftrightarrow{DE}$

X midpoint of \overleftrightarrow{AB}

Prove that: Z is midpoint of \overleftrightarrow{EC}

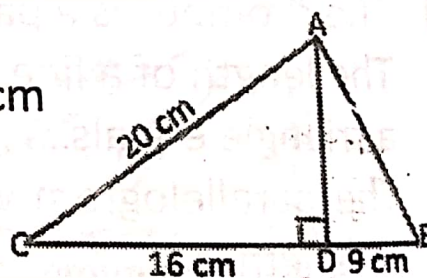


[Q5] A) In the opposite figure:

$\overleftrightarrow{AD} \perp \overleftrightarrow{BC}$, $AC = 20$ cm, $BD = 9$ cm, $CD = 16$ cm

① Find the length of AD, AB

② Find the area of $\triangle ABC$



B) On a square lattice, draw square ABCD where A (1, 1), B (4, 2), C (3, 5), D (0, 4) then Find its image with translation \overleftrightarrow{AB} in direction of \overleftrightarrow{AB}

End of the questions

GEOMETRY – MODEL No 10

[Q1] Choose the correct answer:

(1) Sum of measures of interior angles in any polygon of n sides is $(\dots\dots\dots) \times 180^\circ$

- a) $n + 2$ b) $n - 2$ c) $2 - n$ d) $\frac{n}{2}$

(2) The concave polygon has at least angle

- a) Acute b) Obtuse c) Straight d) reflex

(3) In Parallelogram ABCD, $m(\angle A) = \frac{1}{2} m(\angle B)$, then $m(\angle B) = \dots\dots^\circ$

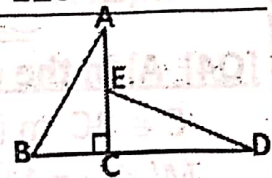
- a) 30 b) 60 c) 90 d) 120

(4) In the opposite figure:

$\triangle ABC$ is image of $\triangle DEC$

with rotation its center C with angle $^\circ$

- a) 90 b) -90 c) 180 d) 360

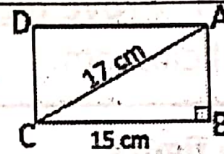


(5) In the opposite figure:

ABCD is a rectangle

its area cm^2

- a) 13 b) 26 c) 120 d) 136



(6) The sum of the measure of the exterior angles of a triangle =

- a) 90° b) 108° c) 180° d) 360°

[Q2] Complete each of the following:

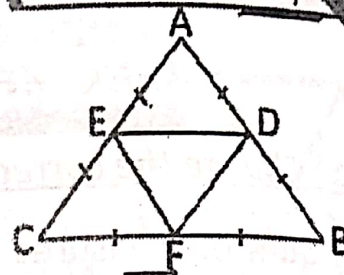
- The image of point $(-2, 0)$ is itself with reflection in
- The sum of measures of the interior angles of a polygon is $18 \times 180^\circ$ then the number of its sides is
- In $\triangle ABC$ if $m(\angle A) + m(\angle C) > m(\angle B)$, then $m(\angle B) \dots\dots 90^\circ$
- The square is a rectangle in which
- The image of the point $(2, 3)$ by translation \overrightarrow{MN} , in direction \overrightarrow{MN} , where $M(2, -1)$, $N(5, 1)$ is

[Q3] A) In the opposite figure:

ΔABC is an equilateral

D, E, F midpoints of its sides, Find:

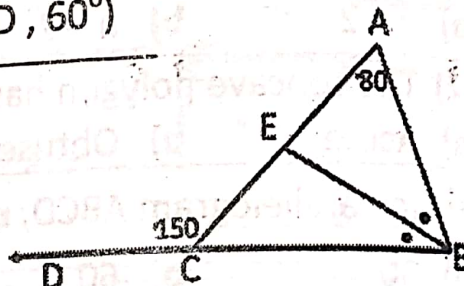
- ① Image of ΔADE with reflection in DE
- ② Image of ΔADE with translation EF in direction \overrightarrow{EF}
- ③ Image of ΔADE with rotation $M(D, 60^\circ)$

**B) In the opposite figure:**

ΔABC , $E \in AC$, $D \in BC$

\overrightarrow{BE} bisects $\angle ABC$, $m(\angle A) = 80^\circ$

$M(\angle ACD) = 150^\circ$

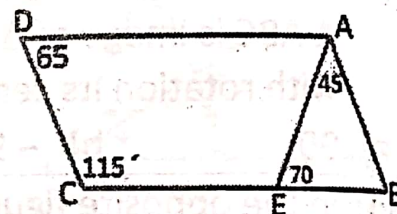
**[Q4] A) In the opposite figure:**

$E \in BC$, $m(\angle D) = 65^\circ$

$M(\angle C) = 115^\circ$, $m(\angle AEB) = 70^\circ$,

$M(\angle BAE) = 45^\circ$, **Prove that:**

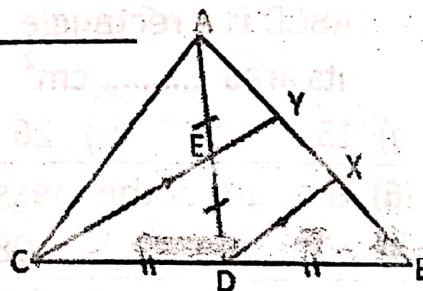
$ABCD$ is a Parallelogram.

**B) In the opposite figure:**

$\overline{XD} \parallel \overline{YC}$, D is midpoint of \overline{BC} ,

E is midpoint of \overline{AD}

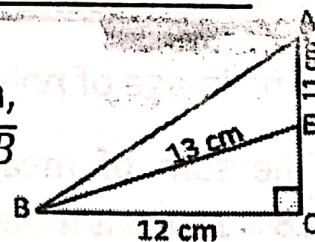
Prove that: $AY = XY = XB$

**[Q5] A) In the opposite figure:**

ΔABC is right at C , $AE = 11$ cm, $BE = 13$ cm,

$BC = 12$ cm, Find the length of \overline{EC} , \overline{AB}

then Find the area of ΔABC



- B)** On a square lattice, draw ΔABC , $A(3, -1)$, $B(5, 2)$, $C(-2, 4)$ then Find its image with rotation $M(O, 180^\circ)$

End of the questions